

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1 – 8. (canceled)

9. (currently amended) ~~The method of claim 3, further comprising the step of:~~ A method of performing failure analysis upon a multi-layer semiconductor device, comprising the steps of:

exciting a gain medium containing molecular fluorine and disposed in a resonant cavity to generate an output beam having a wavelength around 157 nm;

and directing the output beam onto a multi-layer semiconductor device to selectively etch away material therefrom;

shaping the beam into a pattern using a mask;

imaging the shaped beam onto the semiconductor device; and

viewing the etching of the material using a camera aligned co-linearly with a final trajectory of the output beam.

Claims 10 – 18. (previously canceled)

Claims 19 – 26. (canceled)

27. (currently amended) ~~The method of claim 21, further comprising the step of:~~ A method of performing failure analysis upon a multi-layer semiconductor device, the method comprising the steps of:

exciting a gain medium containing molecular fluorine and disposed in a resonant cavity to generate an output beam having a wavelength around 157 nm;

directing the output beam onto a multi-layer semiconductor device that includes integrated circuitry covered by a passivation layer, wherein a portion of the passivation layer is etched away by the output beam to expose the integrated circuitry;

shaping the beam into a pattern using a mask;  
imaging the shaped beam onto the semiconductor device;  
viewing the etching of the material using a camera aligned co-linearly with a final trajectory of the output beam.

Claims 28 – 34. (canceled)

35. (currently amended) ~~The method of claim 30, further comprising the step of:~~ A method of etching a passivation layer formed on a semiconductor substrate using a beam of radiation having a wavelength of 157 nm generated from a molecular fluorine laser comprising the steps of:

directing the beam of 157 nm radiation towards the passivation layer;  
selectively removing a portion of the passivation layer using the directed beam;  
shaping the beam into a pattern using a mask, wherein the directing step includes  
imaging the shaped beam onto the semiconductor device;  
viewing the removal of the passivation layer using a camera aligned co-linearly with a final trajectory of the beam.